



CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 :2005



Job No.: CTCE/BBMP/W.No.14/KRIDL/CSR-2/762c/CEMENT/2014-15

Date: 13.02.2015

TEST REPORT ON CEMENT

* CUSTOMER	:	Asst. Executive Engineer, T. Dasarahalli Sub Division, BBMP, Bangalore.
* AGENCY	:	Technical Manager (West), KRIDL, Bangalore.
* NAME OF THE WORK	:	Improvements to roads & drains near behind widia factory to Sriram Reddy house upto SWD in Ward No.14, Bagalagunte, BBMP, Bangalore.
* REFERENCE	:	BBMP/DZ/AEE/TDSD/PR/2014-15 Dated: 11.02.2015
SAMPLE ID	:	Cement - (Sample 1)
SAMPLE RECEIVED ON	:	11.02.2015
PERIOD OF TESTING	:	11.02.2015 to 13.02.2015



The results of the tests conducted on the cement sample are as follows:

Sl. No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 8112-2013
1	Standard Consistency	IS-4031 (Part -4) 1988(RA-2009)	30.00 %	-
2	a) Initial Setting Time	IS-4031 (Part -5) 1988(RA-2009)	155 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5) 1988(RA-2009)	485 Minutes	Not More than 600 Minutes
3	Soundness by Le Chartier Method	IS-4031 (Part-3) 1988(RA-2009)	1 mm	Not more than 10mm

*Information is furnished by the Customer/Representative.

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Verified

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ಬೃಹತ್ ಬೆಂಗಳೂರು ಮಹಾನಗರ ಪಾಲಿಕೆ
ಪಾರದರ್ಶಕತೆ, ಬೆಂಗಳೂರು - 560 073

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Job No.: CTCE/BBMP/W.No.14/KRIDL/CSR-2/762c/AGG/GR/2014-15

: 13.02.2015

TEST REPORT ON DETERMINATION GRADATION OF COARSE AGGREGATES

* **Customer** : Asst. Executive Engineer, T. Dasarahalli Sub Division, BBMP, Bangalore.

* **Agency** : Technical Manager (West), KRIDL, Bangalore.

* **Name of Work** : Improvements to roads & drains near behind widia factory to Sriram Reddy houde upto SWD in Ward No.14, Bagalagunte, BBMP, Bangalore.

Reference : BBMP/DZ/AEE/TDSD/PR/2014-15 Dated: 11.02.2015

Technical Reference : IS : 2386 Part 1 -1963 RA-2007

Sample ID : Coarse Aggregates (40mm) - (Sample 1)

Sample Received on : 11.02.2015

Date of Testing : 13.02.2015



Total Wt. of Aggregates in gms= 10000

Is Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2007)	
		Graded	Single Sized
80	100	100	-
63	100	-	100
40	97.43	95-100	85-100
20	42.67	30-70	0-20
10	18.52	10-35	0-5
4.75	2.31	0-5	-

* Information is furnished by the Customer/Representative

Remarks : This sample is under Graded specific limits.

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Verifying
S. R. H.

ಶಿವಶಂಕರ ಕಾರ್ತಿಕೇಶ್ವರ ಲಕ್ಷ್ಮೀನಾರಾಯಣ
ಉಪ ನಿರ್ದೇಶಕರು
ಪ್ರಕೃತ್ ಬೆಂಗಳೂರು ಮಹಾನಗರ ಪಾಲಿಕೆ
ಬಾಡಲಗುಂದಿ, ಬೆಂಗಳೂರು - 560 073

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: 13.02.2015

TEST REPORT ON DETERMINATION GRADATION OF COARSE AGGREGATES

- * Customer : Asst. Executive Engineer, T. Dasarahalli Sub Division, BBMP, Bangalore.
- * Agency : Technical Manager (West), KRIDL, Bangalore.
- * Name of Work : Improvements to roads & drains near behind widia factory to Sriram Reddy houde upto SWD in Ward No.14, Bagalagunte, BBMP, Bangalore.
- * Reference : BBMP/DZ/AEE/TDSD/PR/2014-15 Dated: 11.02.2015
- Technical Reference : IS : 2386 Part 1 -1963 RA-2007
- Sample ID : Coarse Aggregates (20mm) – (Sample 1)
- Sample Received on : 11.02.2015
- Date of Testing : 13.02.2015



Total Wt. of Aggregates in gms= 5000

Is Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS :383-1970 (RA- 2007)	
		Graded	Single Sized
40	100	100	100
20	95.96	95-100	85-100
10	32.26	25-55	0-20
4.75	5.14	0-10	0-5

* Information is furnished by the Customer/Representative

Remarks : This sample is under Graded specific limits

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Job No.: CTCE/BBMP/W.No.14/KRIDL/CSR-2/762c/CC Solid Block/2014-15

: 20.02.2015

TEST REPORT ON SOLID CONCRETE BLOCKS

* Customer : **Asst. Executive Engineer, T. Dasarahalli Sub Division, BBMP, Bangalore.**

* Agency : **Technical Manager (West), KRIDL, Bangalore.**

* Name of the Work : **Improvements to roads & drains near behind widia factory to Sriram Reddy houde upto SWD in Ward No.14, Bagalagunte, BBMP, Bangalore.**

Reference : **BBMP/DZ/AEE/TDSD/PR/2014-15 Dated: 11.02.2015**

Sample Received on : **13.02.2015**

Date of Testing : **20.02.2015**

Size of Blocks : **400mm x 200mm x 200mm**

Cross Sectional Area : **80000 mm²**

Technical Reference : **IS: 2185 (Part 1) - 2005**

No. of Blocks Tested : **08**



Sl.No.	Block ID	Wt. in Kg	Failure load (KN)	Compressive strength (N/mm ²)	Requirement as per IS 2185 (Part 1) - 2005
1	Block 1	25.22	260.2	3.25	Minimum required Compressive Strength of Individual Units 3.20 N/mm ²
2	Block 2	24.35	261.1	3.26	
3	Block 3	25.61	263.3	3.29	
4	Block 4	26.32	264.5	3.31	
5	Block 5	25.41	261.2	3.27	
6	Block 6	24.63	260.3	3.25	
7	Block 7	26.52	262.2	3.28	
8	Block 8	25.33	263.3	3.29	

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Job No.: CTCE/BBMP/W.No.14/KRIDL/STEEL/2014-15

16.02.2015

TEST REPORT ON REINFORCEMENT STEEL

Customer : Asst. Executive Engineer, T. Dasarahalli Sub Division, BBMP, Bangalore.

Agency : Technical Manager (West), KRIDL, Bangalore.

Name of the Work : Improvements to roads & drains near behind widia factory to Sriram Reddy house upto SWD in Ward No.14, Bagalagunte, BBMP, Bangalore.

Reference : BBMP/DZ/AEE/TDSD/PR/2014-15 Dated: 11.02.2015

Date of Test : 16.02.2015

Technical Reference : IS: 1786-2008



Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm ²	Tensile strength (Ultimate stress) N/mm ²	Elongation percent gauge length		
1	8	0.40	510	552	13.05	O.K	O.K

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verified

T. Dasarahalli

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Signature of T. Dasarahalli
T. Dasarahalli
Asst. Executive Engineer
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Job No.: CTCE/BBMP/W.No.14/KRIDL/STEEL/2014-15

16.02.2015

TEST REPORT ON REINFORCEMENT STEEL

Customer : Asst. Executive Engineer, T. Dasarahalli Sub Division, BBMP, Bangalore.

Agency : Technical Manager (West), KRIDL, Bangalore.

Name of the Work : Improvements to roads & drains near behind widia factory to Sriram Reddy house upto SWD in Ward No.14, Bagalagunte, BBMP, Bangalore.

Reference : BBMP/DZ/AEE/TDSD/PR/2014-15 Dated: 11.02.2015

Date of Test : 16.02.2015

Technical Reference : IS: 1786-2008



Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm ²	Tensile strength (Ultimate stress) N/mm ²	Elongation percent gauge length		
1.	10	0.62	513	556	13.30	O.K	O.K

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Job No.: CTCE/BBMP/W.No.14/KRIDL/CSR-2/762c/CUBE/2014-15

28.03.2015

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

* **Customer** : Asst. Executive Engineer, T. Dasarahalli Sub Division, BBMP, Bangalore.

* **Agency** : Technical Manager (West), KRIDL, Bangalore.

* **Name of the work** : Improvements to roads & drains near behind widia factory to Sriram Reddy houde upto SWD in Ward No.14, Bagalagunte, BBMP, Bangalore.

* **Reference** : BBMP/DZ/AEE/TDSD/PR/2014-15 Dated: 11.02.2015

* **Sample ID** : Cement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm²

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

* **Grade of Concrete** : M₁₅

Compressive Strength as on : 28th day

Sample Received on : 28.02.2015



Sl.No.	* Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm ²)
1	28.02.2015	28.03.2015	8.129	345.5	15.36
2	28.02.2015	28.03.2015	8.259	358.5	15.93
3	28.02.2015	28.03.2015	8.380	369.2	16.41

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Job No.: CTCE/BBMP/W.No.14/KRIDL/WMM/Gradation/2014-15

06.03.2015



GRADATION FOR WMM MORTH TABLE-400-11

Customer : Asst. Executive Engineer, T. Dasarahalli Sub Division, BBMP, Bangalore.

Agency : Technical Manager (West), KRIDL, Bangalore.

Name of Work : Improvements to roads & drains near behind widia factory to Sriram Reddy houde upto SWD in Ward No.14, Bagalagunte, BBMP, Bangalore.

Reference : BBMP/DZ/AEE/TDSD/PR/2014-15 Dated: 11.02.2015

Date of Testing : 06.03.2015

Material : WMM

Sample Location : WMM Mix Plant

Oven Dry Wt (gm): 26400

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits
53	0	0	0	100	100
45	955	955	3.6	96.4	95-100
22.4	7240	8195	31.0	69.0	60-80
11.2	5230	13425	50.9	49.1	40-60
4.75	3020	16445	62.3	37.7	25-40
2.36	4235	20680	78.3	21.7	15-30
0.600	2580	23260	88.1	11.9	8-22
0.075	2240	25500	96.6	3.4	0-8

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13.03.2015

BITUMEN CONTENT DETERMINATION OF BITUMINOUS CONCRETE MIX

As Per IRC:SP:11-1984

CUSTOMER	Asst. Executive Engineer, T. Dasarahalli Sub Division, BBMP, Bangalore.
AGENCY	Technical Manager (West), KRIDL, Bangalore.
NAME OF THE WORK	Improvements to roads & drains near behind widia factory to Sriram Reddy houde upto SWD in Ward No.14, Bagalagunte, BBMP, Bangalore.
REFERENCE	BBMP/DZ/AEE/TDSD/PR/2014-15 Dated: 11.02.2015
SAMPLE I/D	Roads at widia factory to Sriram Reddy houde upto SWD Ward No.14 BBMP, Bangalore.
DATE OF TESTING	13.03.2015

BITUMEN CONTENT DETERMINATION

Description	Trail 1	Trail 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	474	474
3. Weight of Asphalt and Mineral matter Extracted, g	-	-
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g		
6. Weight of Bitumen Extracted, g. (corrected)	26	26.00
7. Bitumen content in %	5.20	5.20
8. Average	5.20	



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verby
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ಸಹಕಾರಿ ಕಾರ್ಪೊರೇಷನ್ ಇಂಜಿನಿಯರಿಂಗ್
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Job No.: CCTCE/BBMP/W.No.14/KRIDL/BC/Bitumen/2014-15

13.03.2015

GRADATION DETERMINATION OF BITUMINOUS CONCRETE MIX

As Per IS 2386 and IRC:SP:11-1984

CUSTOMER	Asst. Executive Engineer, T. Dasarahalli Sub Division, BBMP, Bangalore.
AGENCY	Technical Manager (West), KRIDL, Bangalore.
NAME OF THE WORK	Improvements to roads & drains near behind widia factory to Sriram Reddy houde upto SWD in Ward No.14, Bagalagunte, BBMP, Bangalore.
REFERENCE	BBMP/DZ/AEE/TDSD/PR/2014-15 Dated: 11.02.2015
SAMPLE I/D	Roads at widia factory to Sriram Reddy houde upto SWD Ward No.14 BBMP, Bangalore.
DATE OF TESTING	13.03.2015

GRADATION AFTER EXTRACTION

Sieve Size in mm	Trail 1				Specified Limits as per MORTH specification table 500-18 (Grading-2)
	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	
19	0	0	0	100	100
13.2	46.22	9.75	9.75	90.25	79-100
9.5	33.21	7.01	16.76	83.24	70-88
4.75	83.22	17.56	34.31	65.69	53-71
2.36	90.25	19.04	53.35	46.65	42-58
1.18	42.56	8.98	62.33	37.67	34-48
0.6	33.15	6.99	69.33	30.67	26-38
0.3	29.12	6.14	75.47	24.53	18-28
0.15	40.23	8.49	83.96	16.04	12-20
0.075	51.28	10.82	94.78	5.22	4-10

Sieve Size in mm	Trail 2				Specified Limits as per MORTH specification table 500-18 (Grading-2)
	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	
19	0	0	0	100	100
13.2	53.26	11.24	11.24	88.76	79-100
9.5	33.2	7.00	18.24	81.76	70-88
4.75	73.21	15.45	33.69	66.31	53-71
2.36	95.6	20.17	53.85	46.15	42-58
1.18	40.25	8.49	62.35	37.65	34-48
0.6	36.25	7.65	69.99	30.01	26-38
0.3	29.55	6.23	76.23	23.77	18-28
0.15	35.24	7.43	83.66	16.34	12-20
0.075	52.65	11.11	94.77	5.23	4-10

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